REMARKS/ARGUMENTS

Claims 20 through 22 have been amended to help further define the invention. Support for the amendments can be found, for example, at page 7, line 15 through page 8, line 9.

New claims 25 through 34 have been added. Support for the new claims can be found, for example, at page 7, line 15 through page 8, line 9 and in original claims 23 and 24.

No new subject matter has been added.

Claims 20 through 34 are now pending.

Amendment of the claims is not an acquiescence to the pending rejections, but have been done to help expedite prosecution of the application. Applicant reserves the right to prosecute the claims as originally filed in this or a continuation application. No loss of equivalents should be inferred from these amendments as they are being put forth to help better define the invention.

Applicant thanks the Examiner for pointing out the prior incomplete response. For this, we apologize.

Rejection of Claims 20 and 21 Under 35 U.S.C. § 112, Second Paragraph

Claims 20 and 21 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Office Action noted that the language "altering" was problematic.

Claims 20 and 21 have been amended to distinctly claim the subject matter of the invention, thereby obviating the basis for this rejection.

Reconsideration and withdrawal are respectfully requested.

Rejection of Claims 22 and 23 Under 35 U.S.C. § 102

Claims 22 and 23 are rejected under 35 U.S.C. § 102(b) as being anticipated by Park et al., U.S. Patent No. 6,271,278, hereinafter "Park". Applicant respectfully traverses the rejection for at least the following reason.

The present invention pertains to a prosthetic spinal disc nucleus comprising a hydrogel core selected from the group consisting of poly(acrylamides), poly(N-vinyl-2-pyrrolidones), polyacrylates, poly (vinyl alcohols), poly(ethylene oxides), polyacrylonitriles, and acrylamide/acrylonitrile block co-polymers having cations incorporated into the hydrogel matrix, such that the swelling rate of the hydrogel core is increased relative to a hydrogel core devoid of such cations.

Park teaches ***crosslinked*** hydrogels. All of Park's teachings focus on crosslinking of various ethylenically unsaturated monomers to from a matrix that contains a "fast water-absorbing material", noted as a disintegrant.

The present invention ***does not include a crosslinked hydrogel nor a disintegrant.*** In contrast the present invention pertains to a hydrogel core selected from the group consisting of poly(acrylamides), poly(N-vinyl-2-pyrrolidones), polyacrylates, poly (vinyl alcohols), poly(ethylene oxides), polyacrylonitriles, and acrylamide/acrylonitrile block co-polymers having cations incorporated into the hydrogel matrix.

Park fails to teach or suggest that the swelling rate of any hydrogel core is increased relative to a hydrogel core devoid of cations.

Therefore, Park does not teach or suggest the subject matter as presently claimed.

Applicant respectfully requests reconsideration and withdrawal of the pending rejection.

Rejection of Claims 20 and 21 Under 35 U.S.C. § 103

Claims 20 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Park et al. (U.S. Patent No. 6,271,278) as above. Applicant respectfully traverses the rejection for at least the following reasons.

The present application is drawn to an improved prosthetic spinal disc nucleus having a hydrogel core sized for implantation into a nucleus cavity and configured to hydrate from a dehydrated state to a hydrated state at a natural swelling rate. The hydrogel core adapted to support opposing vertebrae in the hydrated state, wherein the hydrogel core is selected from the group consisting of poly(acrylamides), poly(N-vinyl-2-pyrrolidones), polyacrylates, poly (vinyl alcohols), poly(ethylene oxides), polyacrylonitriles, and acrylamide/acrylonitrile block co-polymers to hydrate at an elevated swelling rate that is at least 125% greater than the natural swelling rate.

The present application is also drawn to an improved prosthetic spinal disc nucleus having a hydrogel core sized for implantation into a nucleus cavity and configured to hydrate from a dehydrated state to a natural equilibrium swelling level adapted to support opposing vertebrae. The hydrogel core is selected from the group consisting of poly(acrylamides), poly(N-vinyl-2-pyrrolidones), polyacrylates, poly (vinyl alcohols), poly(ethylene oxides), polyacrylonitriles, and acrylamide/acrylonitrile block co-polymers such that the device hydrates to an elevated equilibrium swelling level that is at least 110% greater than the natural equilibrium swelling level.

The arguments presented above for Park are reiterated here in their entirety.

Park fails to teach or suggest, provide any motivation or an expectation of success to a person having ordinary skill in the art that an ***uncrosslinked*** hydrogel would be suitable for a prosthetic spinal disc nucleus.

Park fails to teach or suggest, provide any motivation or an expectation of success to a person having ordinary skill in the art that the uncrosslinked hydrogel suitable for a prosthetic spinal disc nucleus would be selected from poly(acrylamides), poly(N-vinyl-2-pyrrolidones),

polyacrylates, poly (vinyl alcohols), poly(ethylene oxides), polyacrylonitriles, and acrylamide/acrylonitrile block co-polymers.

Park fails to teach or suggest, provide any motivation nor an expectation of success to a person having ordinary skill in the art that the uncrosslinked hydrogel suitable for a prosthetic spinal disc nucleus would hydrate to an elevated equilibrium swelling level that is at least 110% greater than the natural swelling rate, let alone 125% greater than the natural swelling rate.

This application now stands in allowable form and reconsideration and allowance is respectfully requested.

Respectfully submitted,

DORSEY & WHITNEY LLP
Customer Number 25763

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By: _____
Scott D. Rothenberger, Reg. No. 41,277
(612) 340-8819